

Title (en)

Implements for injecting substances below the surface of the soil.

Title (de)

Vorrichtung zum Einbringen von Mitteln in den Boden.

Title (fr)

Dispositif pour injecter des matières sous la surface du sol.

Publication

**EP 0056329 A1 19820721 (EN)**

Application

**EP 82300131 A 19820112**

Priority

GB 8100746 A 19810112

Abstract (en)

[origin: US4426940A] A machine for burying slurry, sewage, or other soil-improving fluids has a hollow straight forward-leaning tine which carries at its bottom end an arched, forward-sloping delta-shaped shoe for lifting the soil into the form of a tunnel. The hollow interior of the tine opens through the roof of this shoe, and slurry is delivered through the tine into the cavity under the shoe. A free-running vibrator on the tine vibrates it and the shoe vertically. The tine is resiliently loaded by a spring to its working position, and the reaction of the spring is applied directly to a reaction lever separately pivoted on a subframe carrying the tine. The spring reaction biases the lever downwards, and the lever is supported at its rearward end behind the tine by a roller which closes the slit formed by the tapered leading edge of the tine.

IPC 1-7

**A01C 23/02**; **A01B 39/10**; **A01B 35/12**

IPC 8 full level

**A01B 35/12** (2006.01); **A01B 39/10** (2006.01); **A01C 23/02** (2006.01)

CPC (source: EP US)

**A01B 35/12** (2013.01 - EP US); **A01B 39/10** (2013.01 - EP US); **A01C 23/02** (2013.01 - EP US)

Citation (search report)

- [A] FR 1515660 A 19680301 - ROTARY HOES LTD
- [A] DE 335464 C 19210924 - PAUL PLATH
- [A] GB 1217473 A 19701231 - MECHANOX N V [NL]
- [A] DE 2652734 A1 19771201 - WEICHEL ERNST
- [A] FR 2241347 A1 19750321 - YEOMANS PTY LTD PA [AU]
- [A] US 1524369 A 19250127 - RAMAGE GEORGE M

Cited by

EP0288173A1; FR2722361A1; EP0439216A1; EP0587219A1; EP0629338A1; BE1007182A3; NL2015744B1; EP3213617A1; EP1897429A1; GB2324698A; GB2324698B; WO9823142A1

Designated contracting state (EPC)

AT BE CH DE FR GB IT LU NL SE

DOCDB simple family (publication)

**EP 0056329 A1 19820721**; **EP 0056329 B1 19850424**; AT E12872 T1 19850515; DE 3263186 D1 19850530; GB 2090713 A 19820721; GB 2090713 B 19841114; US 4426940 A 19840124

DOCDB simple family (application)

**EP 82300131 A 19820112**; AT 82300131 T 19820112; DE 3263186 T 19820112; GB 8100746 A 19810112; US 33829382 A 19820111